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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/784,707	02/15/2001	Angelo Bastioli	13929/TBA	3139

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Maurice B. Stiefel, Esq.
Bryan, Cave, McPheeters & McRoberts
245 Park Avenue
New York, NY 10167-0034

EXAMINER

CHANG, VICTOR S

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 11/06/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-7

Office Action Summary	Application No.	Applicant(s)	
	09/784,707	BASTIOLI ET AL.	
	Examiner	Art Unit	
	Victor S Chang	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 33-38 and 41-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32, 39 and 40 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>3,6</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-32 and 39-40, drawn to a partly finished foam sheet material, classified in class 428, subclass 304.4.
 - II. Claims 33-38 and 41-45, drawn to a process for the production of foam sheet by extruder, classified in class 264, subclass various.
2. The inventions are distinct, each from the other because of the following reasons:

Inventions Group II and Group I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product as claimed can be made by another and materially different process such as lamination.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Warren MacRae on 10/30/2002 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-32 and 39-40. Affirmation of this election must be made by applicant in replying to this Office action. Claims 33-38 and 41-45 are withdrawn from further

consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-32 and 39-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They appear to be a literal translation into English from a foreign document and are replete with grammatical and idiomatic errors. Examples include:

In claims 1 and 2, line 4 in each claim, the Examiner suggests change "dimensions" to --size--; and line 5 in each claim, after "cell" insert --size--.

In claim 1 and throughout, the phrase "in particular" is vague and indefinite, i.e., it is not clear the exact limitation the Applicant intends to claim.

In claim 3, line 3, after "cell" insert --size--.

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In claim 4, line 3, change "dimensions" to --size--.

Claims 5, 6, 7 and other should be written in proper Markush format.

In claim 16, line 4, the term "possibly" is vague and indefinite.

In claim 18, line 4, the term "preferably" is vague and indefinite.

Claims 39 and 40 appear to be some hybrid of a contemplated article combination and a contemplated method of use, and as such are clearly informal.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-32 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Altieri (US 5153037).

Altieri's invention is directed to a biodegradable shaped product comprising an expanded modified flour product (Abstract). It is noted that the modified flour is inherently a destructured or complexed starch. Further, Altieri discloses that the cell size is typically about 100 to 600 microns and the bulk density of the product is from about 0.1 to 5 lb/ft³ (i.e., 1.6 to 80.3 kg/m³) (column 7, lines 21 to 29).

For claims 1-4, Although Altieri does not expressly state the cell size distribution of the expanded article and the average cell size, it is noticed that since the scope of the technical field, i.e., expanded destructured or complexed starch in the instant claimed

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invention is essentially the same as Altieri's invention, therefore, in the absence of unexpected results, it is believed that the cell size distribution and the average cell size are each either inherently disclosed or an obvious optimization to one of ordinary skill in the art, motivated by the desire to obtain a uniform resilient foam product.

For claim 5-6, Altieri teaches that Starches from different sources, e.g., potato, corn, tapioca, and rice, etc. (column 4, lines 4-15) and both unmodified or modified starch may be used (column 4, lines 38-40).

For claim 7, Altieri teaches that "modified" means that the starch can be derivatized or modified by typical processes known in the art, e.g., esterification, etherification, oxidation, acid hydrolysis, cross-linking and enzyme conversion (column 4, lines 47-51).

For claim 8, it is noted that Altieri is silent on the opening/closing cycles of the formed hinges from the product. However, since Altieri's invention has essentially the same scope as set forth above, it is believed that the aforementioned property is also either inherently disclosed or an obvious optimization.

With respect to product-by-process claims 9-11, Applicant must show that the resultant article is patentably distinct from those taught by the reference. It should be pointed out that product-by-process claims are product claims and that to be limiting in a product claim, a process limitation must be evidenced as effecting the structure or chemistry of the resultant product over the prior art. Further, the burden of proof for this showing is on Applicant after the Examiner presents an otherwise prima facie rejection.

Note MPEP 2113 for a more detailed description.

not
p-by-p.

For claims 12-17, Altieri teaches that density as well as resiliency and flexibility can be improved by incorporation of synthetics such as polyvinyl alcohol, polyvinyl acetate, polyurethane, polystyrene, poly(ethylene vinyl acetate) and polyvinylpyrrolidone. (column 5, lines 28-32). Further, the modified and unmodified starch are inherently biodegradable polymers of natural origin.

For claims 18-19, it is believed that including a suitable amount of nucleating agent to assisting the foaming of an expanded product is old and well known. Note also as evidence the state of the art Decker, III et al. (US 5437924), which is directed to a compostable, biodegradable foam core board, and discloses that additives such as nucleating agents can be used (column 3, lines 8-12).

For claims 20-23 and 32, Altieri teaches that additive compounds may also be combined or blended with the starch starting material to improve properties such as strength, flexibility, water resistance, resiliency, flame retardancy, density, color, etc. It is noted that Altieri does not expressly state additives such as organic fillers and fibers, plasticizers, alimentary oils, organic acids and synthetic waxes, however, in the absence of unexpected results, it is believed that each of the aforementioned additives are old and well known to one of ordinary skill in the art.

For claims 24-28, 31 and 40, Altieri teaches that in preparing shaped products of increased density and thickness can be obtained by pressing together layers of one or more extruded sheets (column 6, lines 18-44). As such it is believed that laminating with biodegradable woven, non-woven or films via thermal process or biodegradable

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adhesives are either inherently disclosed or an obvious selection to one of ordinary skill in the art, motivated by the desire to make wholly biodegradable shapeable products.

For claims 29-31 and 39, Altieri teaches that the Extrusion is a conventional well known technique used in many applications for processing food starch materials to produce products such as films, foods and confectioneries and gelatinized starches (column 6, lines 59-64). Further, it is believed that coextrusion to form multi-layered structures are also old and well known, and the melting point of the starch based films are inherently greater than 60°C.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC
VSC
November 5, 2002

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP 1300-
1700

Daniel Zinker